

CRF Errors Corrected by the STIC Syst Branch

Serial Number: 09/483,337

CRF Processing Date: 1/15/2002
 Edited by: [Signature]
 Verified by: [Signature] (STIC staff)

ENTERED

RECEIVED

JAN 22 2002

TECH CENTER 1600/290

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically:
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically:
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included:
- ☐ Deleted extra, invalid, headings used by an applicant, specifically:
- ☐ Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as
- ☐ Inserted mandatory headings, specifically:
- ☐ Corrected an obvious error in the response, specifically:
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically:
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted **ending** stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected:
- ☒ Other: corrected <1207 placement

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95

PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/483,337

DATE: 01/15/2002
TIME: 20:18:51

Input Set: I483337.RAW

This Raw Listing contains the General Information
Section and up to first 5 pages.

p.5

1 <110> APPLICANT: Kool, Eric T.
2 <120> TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR NONENZYMATIC LIGATION OF OLI
3 <130> FILE REFERENCE: 220.00040101
4 <140> CURRENT APPLICATION NUMBER: US/09/483,337
5 <141> CURRENT FILING DATE: 2000-01-14
6 <150> EARLIER APPLICATION NUMBER: US 60/116,059
7 <151> EARLIER FILING DATE: 1999-01-15
8 <160> NUMBER OF SEQ ID NOS: 40
9 <170> SOFTWARE: PatentIn version 3.0
10 <210> SEQ ID NO 1
11 <211> LENGTH: 28
12 <212> TYPE: DNA
13 <213> ORGANISM: Artificial
14 <220> FEATURE:
15 <223> OTHER INFORMATION: autoligating hairpin
16 <220> FEATURE:
17 <221> NAME/KEY: misc_feature
18 <222> LOCATION: (1)..(1)
19 <223> OTHER INFORMATION: 5'-deoxy-5'-iodothymidine
20 <220> FEATURE:
21 <221> NAME/KEY: misc_feature
22 <222> LOCATION: (28)..(28)
23 <223> OTHER INFORMATION: deoxyadenosine with a phosphorothioate group on its
24 3' hydroxyl group
25 <400> SEQUENCE: 1
W--> 26 nccagcgtac ttttgtacgc tggatgcn 28
27 <210> SEQ ID NO 2
28 <211> LENGTH: 28
29 <212> TYPE: DNA
30 <213> ORGANISM: Artificial
31 <220> FEATURE:
32 <223> OTHER INFORMATION: hairpin
33 <400> SEQUENCE: 2
34 tccagcgtac ttttgtacgc tggatgca 28
35 <210> SEQ ID NO 3
36 <211> LENGTH: 12
37 <212> TYPE: DNA
38 <213> ORGANISM: Artificial
39 <220> FEATURE:
40 <223> OTHER INFORMATION: oligonucleotide
41 <220> FEATURE:
42 <221> NAME/KEY: misc_feature
43 <222> LOCATION: (1)..(1)
44 <223> OTHER INFORMATION: 5'-deoxy-5'-iodothymidine

PAGE: 2

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/483,337DATE: 01/15/2002
TIME: 20:18:51

Input Set: I483337.RAW

45 <400> SEQUENCE: 3
W--> 46 ntcacgagcc tg 12
47 <210> SEQ ID NO 4
48 <211> LENGTH: 18
49 <212> TYPE: DNA
50 <213> ORGANISM: Artificial
51 <220> FEATURE:
52 <223> OTHER INFORMATION: splint oligomer
53 <400> SEQUENCE: 4
54 ctagtccaaa gtgctcgg 18
55 <210> SEQ ID NO 5
56 <211> LENGTH: 20
57 <212> TYPE: DNA
58 <213> ORGANISM: Artificial
59 <220> FEATURE:
60 <223> OTHER INFORMATION: oligonucleotide
61 <220> FEATURE:
62 <221> NAME/KEY: misc_feature
63 <222> LOCATION: (1)..(1)
64 <223> OTHER INFORMATION: deoxyguanosine which is radiolabeled with 32P at its 5' en
65 <220> FEATURE:
66 <221> NAME/KEY: misc_feature
67 <222> LOCATION: (8)..(8)
68 <223> OTHER INFORMATION: deoxythymidine with a phosphorothioate group on its
69 3' hydroxyl group
70 <400> SEQUENCE: 5
W--> 71 natcaggntt cacgagcctg 20
72 <210> SEQ ID NO 6
73 <211> LENGTH: 20
74 <212> TYPE: DNA
75 <213> ORGANISM: Artificial
76 <220> FEATURE:
77 <223> OTHER INFORMATION: 20mer duplex carrying a sulfur linkage
78 <220> FEATURE:
79 <221> NAME/KEY: misc_feature
80 <222> LOCATION: (8)..(8)
81 <223> OTHER INFORMATION: deoxythymidine with a phosphorothioate group on its
82 3' hydroxyl group
83 <400> SEQUENCE: 6
W--> 84 gatcaggntt cacgagcctg 20
85 <210> SEQ ID NO 7
86 <211> LENGTH: 20
87 <212> TYPE: DNA
88 <213> ORGANISM: Artificial
89 <220> FEATURE:
90 <223> OTHER INFORMATION: sense primer
91 <400> SEQUENCE: 7
92 gtggggcagg agaccctgta 20
93 <210> SEQ ID NO 8
94 <211> LENGTH: 20

PAGE: 3

RAW SEQUENCE LISTING
 PATENT APPLICATION US/09/483,337

DATE: 01/15/2002
 TIME: 20:18:51

Input Set: I483337.RAW

```

95 <212> TYPE: DNA
96 <213> ORGANISM: Artificial
97 <220> FEATURE:
98 <223> OTHER INFORMATION: antisense primer
99 <400> SEQUENCE: 8
100      ccctcctcta gaggaagcag                                20
101 <210> SEQ ID NO 9
102 <211> LENGTH: 17
103 <212> TYPE: DNA
104 <213> ORGANISM: Artificial
105 <220> FEATURE:
106 <223> OTHER INFORMATION: ligated oligonucleotide
107 <400> SEQUENCE: 9
108      gtgggcgcgcg tcggtgt                                17
109 <210> SEQ ID NO 10
110 <211> LENGTH: 17
111 <212> TYPE: DNA
112 <213> ORGANISM: Artificial
113 <220> FEATURE:
114 <223> OTHER INFORMATION: ligated oligonucleotide
115 <220> FEATURE:
116 <221> NAME/KEY: misc_feature
117 <222> LOCATION: (10)..(10)
118 <223> OTHER INFORMATION: deoxyguanosine with a phosphorothioate group on its
119      3' hydroxyl group
120 <400> SEQUENCE: 10
W--> 121      gtgggcgcgcn tcggtgt                                17
122 <210> SEQ ID NO 11
123 <211> LENGTH: 17
124 <212> TYPE: DNA
125 <213> ORGANISM: Artificial
126 <220> FEATURE:
127 <223> OTHER INFORMATION: ligated oligonucleotide
128 <220> FEATURE:
129 <221> NAME/KEY: misc_feature
130 <222> LOCATION: (10)..(10)
131 <223> OTHER INFORMATION: deoxyguanosine with a phosphoroselenoate group on its
132      3' hydroxyl group
133 <400> SEQUENCE: 11
W--> 134      gtgggcgcgcn tcggtgt                                17
135 <210> SEQ ID NO 12
136 <211> LENGTH: 12
137 <212> TYPE: DNA
138 <213> ORGANISM: Artificial
139 <220> FEATURE:
140 <223> OTHER INFORMATION: ssDNA starting sequence
141 <220> FEATURE:
142 <221> NAME/KEY: misc_feature
143 <222> LOCATION: (1)..(1)
144 <223> OTHER INFORMATION: 5'-deoxy-5'-iodothymidine

```

PAGE: 4

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/483,337DATE: 01/15/2002
TIME: 20:18:51

Input Set: I483337.RAW

145 <400> SEQUENCE: 12
W--> 146 ntcacgagcc tg 12
147 <210> SEQ ID NO 13
148 <211> LENGTH: 18
149 <212> TYPE: DNA
150 <213> ORGANISM: Artificial
151 <220> FEATURE:
152 <223> OTHER INFORMATION: ssDNA template
153 <400> SEQUENCE: 13
154 ggctcgtgaa acctgatc 18
155 <210> SEQ ID NO 14
156 <211> LENGTH: 20
157 <212> TYPE: DNA
158 <213> ORGANISM: Artificial
159 <220> FEATURE:
160 <223> OTHER INFORMATION: product of ssDNA ligation
161 <220> FEATURE:
162 <221> NAME/KEY: misc_feature
163 <222> LOCATION: (8)..(8)
164 <223> OTHER INFORMATION: deoxythymidine with a phosphorothioate group on its
165 3' hydroxyl group
166 <400> SEQUENCE: 14
W--> 167 gatcaggntt cacgagcctg 20
168 <210> SEQ ID NO 15
169 <211> LENGTH: 28
170 <212> TYPE: DNA
171 <213> ORGANISM: Artificial
172 <220> FEATURE:
173 <223> OTHER INFORMATION: duplex DNA starting sequence
174 <220> FEATURE:
175 <221> NAME/KEY: misc_feature
176 <222> LOCATION: (1)..(1)
177 <223> OTHER INFORMATION: 5'-deoxy-5'-iodothymidine
178 <220> FEATURE:
179 <221> NAME/KEY: misc_feature
180 <222> LOCATION: (28)..(28)
181 <223> OTHER INFORMATION: deoxyadenosine with a phosphorothioate group on its
182 3' hydroxyl group
183 <400> SEQUENCE: 15
W--> 184 nccagcgtac ttttgtacgc tggatgcn 28
185 <210> SEQ ID NO 16
186 <211> LENGTH: 56
187 <212> TYPE: DNA
188 <213> ORGANISM: Artificial
189 <220> FEATURE:
190 <223> OTHER INFORMATION: circular product of duplex DNA ligation
191 <220> FEATURE:
192 <221> NAME/KEY: misc_feature
193 <222> LOCATION: (1)..(1)
194 <223> OTHER INFORMATION: deoxythymidine with a 5'-bridging phosphothioester linking

PAGE: 5

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/483,337DATE: 01/15/2002
TIME: 20:18:51

Input Set: I483337.RAW

```

195      group where sulfur is in the 5'-bridging position
196 <220> FEATURE:
197 <221> NAME/KEY: misc_feature
198 <222> LOCATION: (29)..(29)
199 <223> OTHER INFORMATION: deoxythymidine with a 5'-bridging phosphothioester linking
200      group where sulfur is in the 5'-bridging position
201 <400> SEQUENCE: 16
W--> 202      nccagcgtagc tttgtacgc tggatgcanc cagcgtagctt ttgtacgctg gatgca      56
203 <210> SEQ ID NO 17
204 <211> LENGTH: 20
205 <212> TYPE: DNA
206 <213> ORGANISM: Artificial
207 <220> FEATURE:
208 <223> OTHER INFORMATION: splint oligomer
209 <400> SEQUENCE: 17
210      acggtccaaa acatattttg      20
211 <210> SEQ ID NO 18
212 <211> LENGTH: 30
213 <212> TYPE: DNA
214 <213> ORGANISM: Artificial
215 <220> FEATURE:
216 <223> OTHER INFORMATION: one-pot ligation oligonucleotide
217 <220> FEATURE:
218 <221> NAME/KEY: misc_feature
219 <222> LOCATION: (1)..(1)
220 <223> OTHER INFORMATION: 5'-deoxy-5'-iodothymidine
221 <220> FEATURE:
222 <221> NAME/KEY: misc_feature
223 <222> LOCATION: (30)..(30)
224 <223> OTHER INFORMATION: deoxythymidine with a phosphorothioate group on its
225      3' hydroxyl group
226 <400> SEQUENCE: 18
W--> 227      ngatcacttc gtctcttcag caaaatatgn      30
228 <210> SEQ ID NO 19
229 <211> LENGTH: 33
230 <212> TYPE: DNA
231 <213> ORGANISM: Artificial
232 <220> FEATURE:
233 <223> OTHER INFORMATION: one-pot ligation oligonucleotide
234 <220> FEATURE:
235 <221> NAME/KEY: misc_feature
236 <222> LOCATION: (1)..(1)
237 <223> OTHER INFORMATION: 5'-deoxy-5'-iodothymidine
238 <220> FEATURE:
239 <221> NAME/KEY: misc_feature
240 <222> LOCATION: (33)..(33)
241 <223> OTHER INFORMATION: deoxythymidine with a phosphorothioate group on its
242      3' hydroxyl group
243 <400> SEQUENCE: 19
W--> 244      nttggaccgt tggtttcgac ttgtcagagg acn      33

```



Use of n and/or Xaa has been detected in the Sequence Listing.
Review the Sequence Listing to insure a corresponding
explanation is presented in the <220> to <223> fields of
each sequence using n or Xaa.

Input Set: I483337.RAW

Line	Error/Warning	Original Text
26	W "N" or "Xaa" used: Feature required	nccagcgtac ttttgtacgc tggatgcn
46	W "N" or "Xaa" used: Feature required	ntcacgagcc tg
71	W "N" or "Xaa" used: Feature required	natcaggntt cacgagcctg
84	W "N" or "Xaa" used: Feature required	gatcaggntt cacgagcctg
121	W "N" or "Xaa" used: Feature required	gtgggcgccn tcggtgt
134	W "N" or "Xaa" used: Feature required	gtgggcgccn tcggtgt
146	W "N" or "Xaa" used: Feature required	ntcacgagcc tg
167	W "N" or "Xaa" used: Feature required	gatcaggntt cacgagcctg
184	W "N" or "Xaa" used: Feature required	nccagcgtac ttttgtacgc tggatgcn
202	W "N" or "Xaa" used: Feature required	nccagcgtac ttttgtacgc tggatgcanc cagcgtac
227	W "N" or "Xaa" used: Feature required	ngatcacttc gtctcttcag caaaatatgn
244	W "N" or "Xaa" used: Feature required	nttggaccgt tggtttcgac ttgtcagagg acn
270	W "N" or "Xaa" used: Feature required	nttggaccgt tggtttcgac ttgtcagagg actngatc
292	W "N" or "Xaa" used: Feature required	gatcaggntt cacgagcctt atccgtccta tagtgagt
310	W "N" or "Xaa" used: Feature required	nccagcgtat cttttgatac gctggatgca nccagcgt
331	W "N" or "Xaa" used: Feature required	gtgggcgccn
380	W "N" or "Xaa" used: Feature required	ncggtgtggg ttttcactga atatcacgat tacatttt
424	W "N" or "Xaa" used: Feature required	ngtgggcaag agt
456	W "N" or "Xaa" used: Feature required	ngngggcaag agt

1600

RAW SEQUENCE LISTING

DATE: 01/10/2002

PATENT APPLICATION: US/09/483,337

TIME: 16:10:18

Input Set : A:\ES.txt

Output Set: N:\CRF3\01102002\I483337.raw

**Does Not Comply
Corrected Diskette Needed**

add
C1207

3 <110> APPLICANT: Kool, Eric T.
5 COMPOSITIONS AND METHODS FOR NONENZYMATIC LIGATION OF OLIGONUCLEOTIDES
6 AND DETECTION OF GENETIC POLYMORPHISMS

W--> 0 <120> TITLE INVENTION:
8 <130> FILE REFERENCE: 220.00040101
10 <140> CURRENT APPLICATION NUMBER: US 09/483,337
11 <141> CURRENT FILING DATE: 2000-01-14
13 <150> PRIOR APPLICATION NUMBER: US 60/116,059
14 <151> PRIOR FILING DATE: 1999-01-15
16 <160> NUMBER OF SEQ ID NOS: 40
18 <170> SOFTWARE: PatentIn version 3.0
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 28
22 <212> TYPE: DNA

C--> 23 <213> ORGANISM: Artificial
25 <220> FEATURE:
26 <223> OTHER INFORMATION: autoligating hairpin
28 <220> FEATURE:
29 <221> NAME/KEY: misc_feature
30 <222> LOCATION: (1)..(1)
31 <223> OTHER INFORMATION: 5'-deoxy-5'-iodothymidine
34 <220> FEATURE:
35 <221> NAME/KEY: misc_feature
36 <222> LOCATION: (28)..(28)
37 <223> OTHER INFORMATION: deoxyadenosine with a phosphorothioate group on its
38 3' hydroxyl group

Wk> 41 <400> SEQUENCE: 1
42 nccagcgtac ttttgtacgc tggatgcn 28
45 <210> SEQ ID NO: 2
46 <211> LENGTH: 28
47 <212> TYPE: DNA

C--> 48 <213> ORGANISM: Artificial
50 <220> FEATURE:
51 <223> OTHER INFORMATION: hairpin
53 <400> SEQUENCE: 2
54 tccagcgtac ttttgtacgc tggatgca 28
57 <210> SEQ ID NO: 3
58 <211> LENGTH: 12
59 <212> TYPE: DNA

C--> 60 <213> ORGANISM: Artificial
62 <220> FEATURE:
63 <223> OTHER INFORMATION: oligonucleotide
65 <220> FEATURE:
66 <221> NAME/KEY: misc_feature
67 <222> LOCATION: (1)..(1)
68 <223> OTHER INFORMATION: 5'-deoxy-5'-iodothymidine
71 <400> SEQUENCE: 3

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/483,337

DATE: 01/10/2002

TIME: 16:10:18

Input Set : A:\ES.txt

Output Set: N:\CRF3\01102002\I483337.raw

```

OK--> 72 ntcacgagcc tg                                     12
    75 <210> SEQ ID NO: 4
    76 <211> LENGTH: 18
    77 <212> TYPE: DNA
C--> 78 <213> ORGANISM: Artificial
    80 <220> FEATURE:
    81 <223> OTHER INFORMATION: splint oligomer
    83 <400> SEQUENCE: 4
    84 ctagtccaaa gtgctcgg                                     18
    87 <210> SEQ ID NO: 5
    88 <211> LENGTH: 20
    89 <212> TYPE: DNA
C--> 90 <213> ORGANISM: Artificial
    92 <220> FEATURE:
    93 <223> OTHER INFORMATION: oligonucleotide
    95 <220> FEATURE:
    96 <221> NAME/KEY: misc_feature
    97 <222> LOCATION: (1)..(1)
    98 <223> OTHER INFORMATION: deoxyguanosine which is radiolabeled with 32P at its 5' end
   101 <220> FEATURE:
   102 <221> NAME/KEY: misc_feature
   103 <222> LOCATION: (8)..(8)
   104 <223> OTHER INFORMATION: deoxythymidine with a phosphorothioate group on its
   105     3' hydroxyl group
   108 <400> SEQUENCE: 5
OK--> 109 natcaggntt cacgagcctg                               20
   112 <210> SEQ ID NO: 6
   113 <211> LENGTH: 20
   114 <212> TYPE: DNA
C--> 115 <213> ORGANISM: Artificial
   117 <220> FEATURE:
   118 <223> OTHER INFORMATION: 20mer duplex carrying a sulfur linkage
   120 <220> FEATURE:
   121 <221> NAME/KEY: misc_feature
   122 <222> LOCATION: (8)..(8)
   123 <223> OTHER INFORMATION: deoxythymidine with a phosphorothioate group on its
   124     3' hydroxyl group
   127 <400> SEQUENCE: 6
OK--> 128 gatcaggntt cacgagcctg                               20
   131 <210> SEQ ID NO: 7
   132 <211> LENGTH: 20
   133 <212> TYPE: DNA
C--> 134 <213> ORGANISM: Artificial
   136 <220> FEATURE:
   137 <223> OTHER INFORMATION: sense primer
   139 <400> SEQUENCE: 7
   140 gtggggcagg agaccctgta                                   20
   143 <210> SEQ ID NO: 8
   144 <211> LENGTH: 20

```

RAW SEQUENCE LISTING

DATE: 01/10/2002

PATENT APPLICATION: US/09/483,337

TIME: 16:10:18

Input Set : A:\ES.txt

Output Set: N:\CRF3\01102002\I483337.raw

```

145 <212> TYPE: DNA
C--> 146 <213> ORGANISM: Artificial
148 <220> FEATURE:
149 <223> OTHER INFORMATION: antisense primer
151 <400> SEQUENCE: 8
152 ccctcctcta gaggaagcag 20
155 <210> SEQ ID NO: 9
156 <211> LENGTH: 17
157 <212> TYPE: DNA
C--> 158 <213> ORGANISM: Artificial
160 <220> FEATURE:
161 <223> OTHER INFORMATION: ligated oligonucleotide
163 <400> SEQUENCE: 9
164 gtgggcgccg tcggtgt 17
167 <210> SEQ ID NO: 10
168 <211> LENGTH: 17
169 <212> TYPE: DNA
C--> 170 <213> ORGANISM: Artificial
172 <220> FEATURE:
173 <223> OTHER INFORMATION: ligated oligonucleotide
175 <220> FEATURE:
176 <221> NAME/KEY: misc_feature
177 <222> LOCATION: (10)..(10)
178 <223> OTHER INFORMATION: deoxyguanosine with a phosphorothioate group on its
179 3' hydroxyl group
182 <400> SEQUENCE: 10
04-> 183 gtgggcgccn tcggtgt 17
186 <210> SEQ ID NO: 11
187 <211> LENGTH: 17
188 <212> TYPE: DNA
C--> 189 <213> ORGANISM: Artificial
191 <220> FEATURE:
192 <223> OTHER INFORMATION: ligated oligonucleotide
194 <220> FEATURE:
195 <221> NAME/KEY: misc_feature
196 <222> LOCATION: (10)..(10)
197 <223> OTHER INFORMATION: deoxyguanosine with a phosphoroselenoate group on its
198 3' hydroxyl group
201 <400> SEQUENCE: 11
20-> 202 gtgggcgccn tcggtgt 17
205 <210> SEQ ID NO: 12
206 <211> LENGTH: 12
207 <212> TYPE: DNA
C--> 208 <213> ORGANISM: Artificial
210 <220> FEATURE:
211 <223> OTHER INFORMATION: ssDNA starting sequence
213 <220> FEATURE:
214 <221> NAME/KEY: misc_feature
215 <222> LOCATION: (1)..(1)

```

RAW SEQUENCE LISTING

DATE: 01/10/2002

PATENT APPLICATION: US/09/483,337

TIME: 16:10:18

Input Set : A:\ES.txt

Output Set: N:\CRF3\01102002\I483337.raw

```

216 <223> OTHER INFORMATION: 5'-deoxy-5'-iodothymidine
219 <400> SEQUENCE: 12
wcl> 220 ntcacgagcc tg 12
223 <210> SEQ ID NO: 13
224 <211> LENGTH: 18
225 <212> TYPE: DNA
C--> 226 <213> ORGANISM: Artificial
228 <220> FEATURE:
229 <223> OTHER INFORMATION: ssDNA template
231 <400> SEQUENCE: 13
232 ggctcgtgaa acctgatc 18
235 <210> SEQ ID NO: 14
236 <211> LENGTH: 20
237 <212> TYPE: DNA
C--> 238 <213> ORGANISM: Artificial
240 <220> FEATURE:
241 <223> OTHER INFORMATION: product of ssDNA ligation
243 <220> FEATURE:
244 <221> NAME/KEY: misc_feature
245 <222> LOCATION: (8)..(8)
246 <223> OTHER INFORMATION: deoxythymidine with a phosphorothioate group on its
247 3' hydroxyl group
250 <400> SEQUENCE: 14
wcl> 251 gatcaggnntt cacgagcctg 20
254 <210> SEQ ID NO: 15
255 <211> LENGTH: 28
256 <212> TYPE: DNA
C--> 257 <213> ORGANISM: Artificial
259 <220> FEATURE:
260 <223> OTHER INFORMATION: duplex DNA starting sequence
262 <220> FEATURE:
263 <221> NAME/KEY: misc_feature
264 <222> LOCATION: (1)..(1)
265 <223> OTHER INFORMATION: 5'-deoxy-5'-iodothymidine
268 <220> FEATURE:
269 <221> NAME/KEY: misc_feature
270 <222> LOCATION: (28)..(28)
271 <223> OTHER INFORMATION: deoxyadenosine with a phosphorothioate group on its
272 3' hydroxyl group
275 <400> SEQUENCE: 15
wcl> 276 nccagcgtac ttttgtacgc tggatgcn 28
279 <210> SEQ ID NO: 16
280 <211> LENGTH: 56
281 <212> TYPE: DNA
C--> 282 <213> ORGANISM: Artificial
284 <220> FEATURE:
285 <223> OTHER INFORMATION: circular product of duplex DNA ligation
287 <220> FEATURE:
288 <221> NAME/KEY: misc_feature

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/483,337

DATE: 01/10/2002

TIME: 16:10:18

Input Set : A:\ES.txt

Output Set: N:\CRF3\01102002\I483337.raw

```

289 <222> LOCATION: (1)..(1)
290 <223> OTHER INFORMATION: deoxythymidine with a 5'-bridging phosphothioester linking
291     group where sulfur is in the 5'-bridging position
294 <220> FEATURE:
295 <221> NAME/KEY: misc_feature
296 <222> LOCATION: (29)..(29)
297 <223> OTHER INFORMATION: deoxythymidine with a 5'-bridging phosphothioester linking
298     group where sulfur is in the 5'-bridging position
301 <400> SEQUENCE: 16
W> 302 nccagcgtac tttgtacgc tggatgcanc cagcgtactt ttgtacgctg gatgca      56
305 <210> SEQ ID NO: 17
306 <211> LENGTH: 20
307 <212> TYPE: DNA
C--> 308 <213> ORGANISM: Artificial
310 <220> FEATURE:
311 <223> OTHER INFORMATION: splint oligomer
313 <400> SEQUENCE: 17
314 acggtccaaa acatatTTTtg      20
317 <210> SEQ ID NO: 18
318 <211> LENGTH: 30
319 <212> TYPE: DNA
C--> 320 <213> ORGANISM: Artificial
322 <220> FEATURE:
323 <223> OTHER INFORMATION: one-pot ligation oligonucleotide
325 <220> FEATURE:
326 <221> NAME/KEY: misc_feature
327 <222> LOCATION: (1)..(1)
328 <223> OTHER INFORMATION: 5'-deoxy-5'-iodothymidine
331 <220> FEATURE:
332 <221> NAME/KEY: misc_feature
333 <222> LOCATION: (30)..(30)
334 <223> OTHER INFORMATION: deoxythymidine with a phosphorothioate group on its
335     3' hydroxyl group
338 <400> SEQUENCE: 18
W> 339 ngatcacttc gtctcttcag caaaatatgn      30
342 <210> SEQ ID NO: 19
343 <211> LENGTH: 33
344 <212> TYPE: DNA
C--> 345 <213> ORGANISM: Artificial
347 <220> FEATURE:
348 <223> OTHER INFORMATION: one-pot ligation oligonucleotide
350 <220> FEATURE:
351 <221> NAME/KEY: misc_feature
352 <222> LOCATION: (1)..(1)
353 <223> OTHER INFORMATION: 5'-deoxy-5'-iodothymidine
356 <220> FEATURE:
357 <221> NAME/KEY: misc_feature
358 <222> LOCATION: (33)..(33)
359 <223> OTHER INFORMATION: deoxythymidine with a phosphorothioate group on its

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/483,337

DATE: 01/10/2002

TIME: 16:10:19

Input Set : A:\ES.txt

Output Set: N:\CRF3\01102002\I483337.raw

L:0 M:201 W: Mandatory field data missing, TITLE INVENTION
L:23 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:1
L:42 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:48 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:2
L:60 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:3
L:72 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:78 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:4
L:90 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:5
L:109 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:115 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:6
L:128 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:134 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:7
L:146 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:8
L:158 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:9
L:170 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:10
L:183 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
L:189 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:11
L:202 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:208 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:12
L:220 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:226 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:13
L:238 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:14
L:251 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:257 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:15
L:276 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:282 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:16
L:302 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:308 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:17
L:320 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:18
L:339 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:345 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:19
L:364 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:370 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:20
L:382 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:21
L:402 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:410 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:22
L:422 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:23
L:435 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:441 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:24
L:461 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:467 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:25
L:479 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:26
L:492 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:498 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:27
L:510 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:28
L:522 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:29
L:534 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:30
L:546 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:31

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/483,337

DATE: 01/10/2002

TIME: 16:10:19

Input Set : A:\ES.txt

Output Set: N:\CRF3\01102002\I483337.raw

L:565 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31
L:571 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:32
L:583 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:33
L:595 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:34
L:607 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:35
L:619 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:36
L:631 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36
L:637 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:37
L:649 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:38
L:661 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:39
L:679 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39
L:685 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:40